

Claims

It is claimed:

1. A reclining seat back assembly for a toilet, the toilet including a tank and toilet base having a bowl formed therein, the seat back assembly comprising:

a seat back frame pivotally mounted to a first upper surface portion of the toilet base, the seat back frame including a front surface, a first side edge, a second side edge and a bottom edge proximate to the first upper surface portion of the toilet base;

a cushion mounted to the front surface;

at least one button disposed on a side surface of the toilet base, the at least one button accessible by a user of the toilet; and

a seat back operating assembly coupled to the seat back frame and the at least one button, the seat back operating assembly adapted to allow the user to selectively adjust an upright position of the seat back frame in response to actuation of the at least one button.

2. The seat back assembly of claim 1, wherein the seat back operating assembly is concealed within the toilet base.

3. The seat back assembly of claim 1, wherein the toilet further includes:

a first mounted bracket having a first aperture disposed therein, the first mounted bracket fixedly attached to a second upper surface portion of the toilet base, the first mounted bracket proximate to the first side edge of the seat back frame; and

a second mounted bracket having a second aperture disposed therein, the second mounted bracket fixedly attached to a third upper surface portion of the toilet

base, the second mounted bracket proximate to the second side edge of the seat back frame.

4. The seat back assembly of claim 3, wherein the seat back frame further comprises:

a first pin mounted to the first side edge of the seat back frame, the first pin configured to project into the first aperture; and

a second pin mounted to the second side edge of the seat back frame, the second pin configured to project into the second aperture, the second pin projecting in a horizontal direction opposite to the first pin to provide a fixed horizontal pivot axis.

5. The seat back assembly of claim 4, wherein the seat back operating assembly comprises:

a side extension bracket attached to a bottom portion of the first side edge of the seat back frame, the side extension bracket extending into the toilet base;

a worm gear block attached to the side extension bracket, the worm gear block having a threaded hole disposed therein;

a motor assembly electrically coupled to the at least one button; and

a worm gear drive shaft rotatably coupled to the motor assembly and threadedly coupled to the worm gear block, the worm gear drive shaft sized for receipt by the threaded hole.

6. The seat back assembly of claim 5, wherein the motor assembly further comprises a controller, the controller including a microprocessor and a memory coupled to the microprocessor.

7. The seat back assembly of claim 5, wherein a bottom portion of the side extension bracket is forced in a first substantially lateral direction in response to a first direction of rotation of the worm gear shaft, and wherein the bottom portion of the side extension bracket is forced in a substantially lateral second direction in response to a second direction of rotation of the worm gear shaft, the substantially lateral second direction opposite to the substantially lateral first direction, the second direction of rotation opposite to the first direction of rotation.

8. A luxury toilet comprising:

a tank including a tank valve assembly disposed therein, the tank including a front side and a back side;

toilet base operatively coupled to the tank, the toilet base having a bowl formed therein for receiving water from the tank via the tank valve assembly; and

a reclining seat back assembly coupled to the toilet base.

9. The luxury toilet of claim 8, wherein the reclining seat back assembly comprises:

a reclining seat back pivotally coupled to a first upper surface portion of the toilet base, the reclining seat back including a first side edge, a second side edge and a bottom edge proximate to the first upper surface portion of the toilet base, the first upper surface portion of the toilet base at a predetermined distance from the front side of the tank to allow reclining adjustment of the reclining seat back;

at least one button disposed on a side surface of the toilet base, the at least one button accessible by a user of the luxury toilet; and

a seat back operating assembly coupled to the seat back and the at least one button, the seat back operating assembly adapted to allow the user to selectively adjust an upright reclining position of the seat back in response to actuation of the at least one button, the seat back operating assembly concealed within the toilet base.

10. The luxury toilet of claim 9, wherein the luxury toilet further includes:

a first mounted bracket having a first aperture disposed therein, the first mounted bracket fixedly attached to a second upper surface portion of the toilet base, the first mounted bracket proximate to the first side edge of the seat back; and

a second mounted bracket having a second aperture disposed therein, the second mounted bracket fixedly attached to a third upper surface portion of the toilet base, the second mounted bracket proximate to the second side edge of the seat back.

11. The luxury toilet of claim 10, wherein the seat back further comprises:

a first pin mounted to the first side edge of the seat back, the first pin configured to project into the first aperture; and

a second pin mounted to the second side edge of the seat back, the second pin configured to project into the second aperture, the second pin projecting in a horizontal direction opposite to the second pin to provide a fixed horizontal pivot axis.

12. The luxury toilet of claim 11, wherein the seat back operating assembly comprises:

a side extension bracket attached to a bottom portion of the first side edge of the seat back, the side extension bracket extending into the toilet base;

a worm gear block attached to the side extension bracket, the worm gear block having a threaded hole disposed therein;

a motor assembly electrically coupled to the at least one button; and

a worm gear drive shaft rotateably coupled to the motor assembly and threadedly coupled to the worm gear block, the worm gear drive shaft sized for receipt by the threaded hole.

13. The luxury toilet of claim 12, wherein the motor assembly further comprises a controller, the controller including a microprocessor and a memory coupled to the microprocessor.

14. The luxury toilet of claim 12, wherein a bottom portion of the side extension bracket is forced in a first substantially lateral direction in response to a first direction of rotation of the worm gear shaft, and wherein the bottom portion of the side extension bracket is forced in a substantially lateral second direction in response to a second direction of rotation of the worm gear shaft, the substantially lateral second direction opposite to the substantially lateral first direction, the second direction of rotation opposite to the first direction of rotation.

15. A reclining seat back assembly for a toilet, the toilet including a tank and toilet base having a bowl formed therein, the seat back assembly comprising:

a seat back pivotally mounted to a first upper surface portion of the toilet base, the seat back including a first side edge, a second side edge and a bottom edge proximate to the first upper surface portion of the toilet base;

at least one button disposed on a side surface of the toilet base, the at least one button accessible by a user of the toilet; and

a seat back operating assembly coupled to the seat back and the at least one button, the seat back operating assembly adapted to allow the user to selectively adjust an upright position of the seat back in response to actuation of the at least one button.

16. The seat back assembly of claim 15, wherein the seat back operating assembly is concealed within the toilet base.

17. The seat back assembly of claim 15, wherein the seat back operating assembly comprises:

a first side extension bracket attached to a bottom portion of the first side edge of the seat back, the first side extension bracket extending into the toilet base;

a second side extension bracket attached to a bottom portion of the second side edge of the seat back, the second side extension bracket substantially parallel to the first side extension bracket;

a worm gear block attached to the first side extension bracket, the worm gear block having a threaded hole disposed therein;

a motor assembly electrically coupled to the at least one button; and

a worm gear drive shaft rotateably coupled to the motor assembly and threadedly coupled to the worm gear block, the worm gear drive shaft sized for receipt by the threaded hole.

18. The seat back assembly of claim 17, wherein the motor assembly further comprises a controller, the controller including a microprocessor and a memory coupled to the microprocessor.

19. The seat back assembly of claim 17, wherein the toilet further includes:

a first mounted bracket having a first aperture disposed therein, the first mounted bracket fixedly attached to a second upper surface portion of the toilet base, the first mounted bracket proximate to the first side edge of the seat back; and

a second mounted bracket having a second aperture disposed therein, the second mounted bracket fixedly attached to a third upper surface portion of the toilet base, the second mounted bracket proximate to the second side edge of the seat back.

20. The seat back assembly of claim 19, wherein the seat back further comprises:

a first pin mounted to the first side extension bracket, the first pin configured to project into the first aperture; and

a second pin mounted to the second side extension bracket, the second pin configured to project into the second aperture, the second pin projecting in a horizontal direction opposite to the second pin to provide a fixed horizontal pivot axis.